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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,879	04/16/2007	Karl-Hermann Schlingensiepen	VKSW/05	2382

26875 7590 10/12/2007

WOOD, HERRON & EVANS, LLP
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441 VINE STREET
CINCINNATI, OH 45202

EXAMINER	
GIBBS, TERRA C	

ART UNIT	PAPER NUMBER
1635	

MAIL DATE	DELIVERY MODE
10/12/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/567,879	SCHLINGENSIEPEN ET AL.	
	Examiner	Art Unit	
	Terra C. Gibbs	1635	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *2/9/06, 4/6/06, and 4/1/07*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *See Continuation Sheet*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: *sequence search alignments*.

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :February 9, 2006 and May 15, 2006 .

DETAILED ACTION

This Office Action is a response to Applicant's Preliminary Amendment filed February 9, 2006, April 6, 2006, and April 11, 2007.

Claims 5 and 6 have been currently amended. Claims 1-17 are pending in the instant application.

Claims 1-17 have been examined on the merits.

Information Disclosure Statement

Applicant's information disclosure statements filed February 9, 2006 and May 15, 2006 are acknowledged. The submissions are in compliance with the provisions of 37 CFR §1.97. Accordingly, the Examiner has considered the information disclosure statements, and signed copies are enclosed herewith.

Priority

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Nucleotide Sequence Disclosures

This application contains sequence disclosures that are encompassed by the definitions for nucleotide and/or amino acid sequences set forth in 37 C.F.R. §1.821(a)(1) and (a)(2). However, this application fails to comply with the requirements

of 37 C.F.R. §1.821-1.825 for the reason(s) set forth below or on the attached Notice To Comply with Requirements for Patent Applications Containing Nucleotide Sequence and/or Amino Acid Sequence Disclosures. The disclosure contains sequences which fall under the purview of 37 CFR 1.821 through 1.825 as requiring SEQ ID NOs., but which are not so identified. For example, see page 5, lines 2 and 3, page 16, lines 3 and 4 and Abstract. Applicant must fully comply with the sequence rules for any response to this action to be considered fully responsive.

Specification

The disclosure is objected to because it does not comply with the requirements of 37 CFR § 1.74: Reference to drawings, where it states, "When there are drawings, there shall be a brief description of the several views of the drawings and the detailed description of the invention shall refer to the different views by specifying the numbers of the figures, and to the different parts by use of reference letters or numerals (preferably the latter)." Applicants must comply with the requirements of 37 CFR § 1.74 in order for any response to this action to be considered fully responsive.

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: Figure 1 and Figures 2a-2c. In this case, the specification lacks a brief description of the drawings entirely. Corrected drawing sheets in compliance with 37

CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance. Appropriate correction is required.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 7 and 12-14 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd.* v. *Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966). Accordingly, claims 7 and 12-14 have not been further treated on the merits.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 4-7, 12-14, 16 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 4-6 are indefinite because they recite the limitation "The antisense oligonucleotides" in the preamble of the claims. There is insufficient antecedent basis for this limitation in the claims because claim 1, from which claims 4-6 depends recites a singular "antisense oligonucleotide"; not plural "antisense oligonucleotides". Appropriate correction is required.

Claims 16 and 17 are indefinite because they recite the limitation, "The composition of claim 5" or "The composition of claim 6" in the preamble of the claims. There is insufficient antecedent basis for these limitations in the claims because claim 5 and 6 from which claims 16 and 17 depends, respectively, makes reference to an antisense oligonucleotide, not a composition. Appropriate correction is required.

Claims 7, and 12-14 are indefinite because these claims provides for the use of an antisense oligonucleotide or a pharmaceutical composition comprising an antisense oligonucleotide, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4-6, 8-11, and 15-17 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 99/65928 A (Reference A.M on Applicant's Information Disclosure Statement filed February 9, 2006).

Claims 1, 4-6, 16 and 17 are drawn to an antisense oligonucleotide selected from the group consisting of SEQ ID NO:1 and modifications thereof, and a fragment having at least 8 nucleotides of SEQ ID NO:1 and modifications thereof. Claims 8-11 and 15 depend from claim 1 and include all the limitations of claim 1 with the further limitations wherein the antisense oligonucleotide comprises a pharmaceutical composition or a diagnostic composition; wherein the antisense oligonucleotide is integrated into a DNA delivery system comprising viral and/or non-viral vectors together with lipid acids or derivatives thereof; wherein the pharmaceutical composition further comprises an immunostimulatory agent; and wherein the immunostimulatory agent is selected from cytokines, inhibitors of expression and/or function of IL-10, TGF-β, and VEGF.

WO 99/65928 discloses a metastatic breast tumor cell downregulated transcript that comprises a fragment having at least 8 nucleotides of SEQ ID NO:1 of Applicant's invention (see WO 99/6592 at SEQ ID NO:5894 and attached sequence search alignment #1). It is noted that WO 99/65928 discloses that the transcripts of their

invention are used for diagnosis, prognosis and treatment of breast cancer (see Abstract). WO 99/65928 also discloses that the transcripts are used to direct expression of therapeutic genes (e.g. antisense) (see Abstract) and "one can synthesize an antisense based on the sequences provided in the Tables using any method available in the art" (see page 20, lines 1-3). It is noted that SEQ ID NO:5894 taught by WO 99/65928 appears in a Table at page 213. WO 99/65928 also discloses that their invention encompasses co-administration of foreign immunostimulatory polynucleotides (see page 22, lines 7 and 8). WO 99/65928 also discloses that cationic lipid/plasmid complexes can be used to administer the oligonucleotides of their invention to cells (see page 54, lines 3-20).

Therefore, WO 99/65928 anticipates claims 1, 4-6, 8-11, and 15-17 of the Applicant's invention.

Claims 1, 5, 6, 8, and 15-17 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 01/77384 A2 (only Abstract and SEQ ID NO:357682 considered).

The claims are as described above.

WO 01/77384 discloses an oligonucleotide primer for detecting SNP TSC0050733 that comprises a fragment having at least 8 nucleotides of SEQ ID NO:1 of Applicant's invention (see WO 01/77384 at SEQ ID NO:357682 and attached sequence search alignment #2). It is noted that WO 01/77384 discloses that the oligonucleotides of their invention are used for diagnosis, prognosis and treatment of medical disorders (see Abstract only).

Since the prior art primer meets all the structural limitations of the claims, the prior art primer would then be considered to be "an antisense oligonucleotide" as claimed, absent evidence to the contrary. The burden of establishing whether the prior art transcript tag has the further function of being capable of acting as an antisense oligonucleotide falls to Applicant. See MPEP 2112.01, "Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a *prima facie* case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). "When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not." In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). Therefore, the *prima facie* case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. In re Best, 562 F.2d at 1255, 195 USPQ at 433." See also MPEP 2112: "[T]he PTO can require an Applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his [her] claimed product." The MPEP at 2112 citing *In re Fitzgerald* 205 USPQ 594. 596, (CCPA 1980), quoting In re Best 195 USPQ 430 as per above. Therefore, it falls to Applicant to determine and provide evidence that the prior art primer disclosed by WO 01/77384 would or would not have the additional functional limitation of acting as an "antisense oligonucleotide" as instantly claimed.

Therefore, absent evidence to the contrary, WO 01/77384 anticipates claims 1, 5, 6, 8, and 15-17 of the Applicant's invention.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 99/65928 A (Reference A.M on Applicant's Information Disclosure Statement filed February 9, 2006) in view of WO 01/68122 (Reference A.L on Applicant's Information Disclosure Statement filed February 9, 2006).

Claim 1 is drawn to an antisense oligonucleotide selected from the group consisting of SEQ ID NO:1 and modifications thereof, and a fragment having at least 8

nucleotides of SEQ ID NO:1 and modifications thereof. Claims 2 and 3 are dependent on claim 1 and include all the limitations of claim 1 with the further limitations wherein the modification comprises a modified sugar moiety, a modified base, a modified internucleotide linkage, coupling the oligonucleotide to an enhancer of uptake and/or inhibitory activity, and combinations thereof; wherein the antisense oligonucleotide is a phosphorothioate oligodeoxynucleotide.

WO 99/65928 teaches a metastatic breast tumor cell downregulated transcript that comprises a fragment having at least 8 nucleotides of SEQ ID NO:1 of Applicant's invention (see WO 99/6592 at SEQ ID NO:5894 and attached sequence search alignment #1). It is noted that WO 99/65928 teaches that the transcripts of their invention are used for diagnosis, prognosis and treatment of breast cancer (see Abstract). WO 99/65928 also discloses that the transcripts are used to direct expression of therapeutic genes (e.g. antisense) (see Abstract) and "one can synthesize an antisense based on the sequences provided in the Tables using any method available in the art" (see page 20, lines 1-3). It is noted that SEQ ID NO:5894 taught by WO 99/65928 appears in a Table at page 213. WO 99/65928 also teaches that their invention encompasses co-administration of foreign immunostimulatory polynucleotides (see page 22, lines 7 and 8). WO 99/65928 also teaches that cationic lipid/plasmid complexes can be used to administer the oligonucleotides of their invention to cells (see page 54, lines 3-20).

WO 99/65928 does not teach an antisense oligonucleotide selected from the group consisting of SEQ ID NO:1 and modifications thereof, and a fragment having at

least 8 nucleotides of SEQ ID NO:1 and modifications thereof, wherein the modification comprises a modified sugar moiety, a modified base, a modified internucleotide linkage, coupling the oligonucleotide to an enhancer of uptake and/or inhibitory activity, and combinations thereof or wherein the antisense oligonucleotide is a phosphorothioate oligodeoxynucleotide.

WO 01/68122 teaches antisense oligonucleotides targeted to melanoma inhibitory activity (MIA) that comprise modified internucleotide linkages, including phosphorothioate linkages (see page 6, third full paragraph, Example 4 and page 14, first full paragraph).

It would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to make an antisense oligonucleotide comprising a fragment having at least 8 nucleotides of SEQ ID NO:1 using the teachings of WO 99/65928. It would have been obvious to one of ordinary skill in the art to incorporate an internucleotide linkage, including a phosphorothioate linkage on the antisense oligonucleotide using the teachings and motivation of WO 01/68122.

One of ordinary skill in the art would have been motivated to make an antisense oligonucleotide comprising a fragment having at least 8 nucleotides of SEQ ID NO:1 since the prior art taught such a polynucleotide could be used an antisense oligonucleotide for inhibiting expression of therapeutic genes (see WO 99/65928). One of ordinary skill in the art would have been motivated to modify the antisense oligonucleotide to include an internucleotide linkage, such as a phosphorothioate linkage since WO 01/68122 taught that such modifications enhance cellular uptake,

enhance affinity for nucleic acid target, and increase stability in the presence of nucleases.

One of ordinary skill in the art would have expected success at making an antisense oligonucleotide comprising a fragment having at least 8 nucleotides of SEQ ID NO:1 since WO 99/65928 taught the successful use and design of such a oligonucleotide as a transcript tag used for diagnosis and prognosis of breast cancer. One of ordinary skill in the art would have expected success at modifying the antisense oligonucleotide to include an internucleotide linkage, such as a phosphorothioate linkage since WO 01/68122 taught the successful use and design of phosphorothioate-linked antisense oligonucleotides in inhibiting target gene expression.

Therefore, the invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made.

Conclusion

No claims are allowable.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Terra C. Gibbs whose telephone number is 571-272-0758. The examiner can normally be reached on 9 am - 5 pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Schultz can be reached on 571-272-0763. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within 5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public.

For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199.

tcg
October 5, 2007

/Terra Cotta Gibbs/

Sequence search alignment #1

RESULT 8
AAZ86660
ID AAZ86660 standard; DNA; 10 BP.
XX
AC AAZ86660;
XX
DT 07-APR-2000 (first entry)
XX
DE Metastatic breast tumour cell downregulated transcript tag #5894.
XX
KW Human; metastatic breast tumour tissue; breast cancer; tag; primer;
KW non-metastatic breast tumour tissue; gene therapy; anticancer;
KW antimetastatic; vaccine; diagnosis; ss.
XX
OS Homo sapiens.
XX
PN WO9965928-A2.
XX
PD 23-DEC-1999.
XX
PF 18-JUN-1999; 99WO-US013647.
XX
PR 19-JUN-1998; 98US-0089853P.
PR 19-JUN-1998; 98US-0089997P.
PR 19-JUN-1998; 98US-0090039P.
PR 19-JUN-1998; 98US-0090040P.
PR 19-JUN-1998; 98US-0090041P.
XX
PA (GENZ) GENZYME CORP.
PA (ROBE/) ROBERTS B L.
PA (SHAN/) SHANKARA S.
XX
PI Roberts BL, Shankara S;
XX
DR WPI; 2000-106079/09.
XX
PT Isolated polynucleotides differentially expressed between metastatic and
PT non-metastatic breast cancer cells, useful for diagnosis, prevention and
PT treatment of cancer.
XX
PS Claim 1; Page 213; 219pp; English.
XX
CC AAZ80767 to AAZ83941 represent tags corresponding to distinct transcripts
CC that are preferentially transcribed in the metastatic breast tumour
CC tissue (i.e. are upregulated in metastatic breast tumour cells). AAZ83942
CC to AAZ86677 represent tags corresponding to distinct transcripts that are
CC preferentially transcribed in the primary or non-metastatic breast tumour
CC tissue (i.e. are downregulated in metastatic breast tumour cells). These
CC transcripts can be used for diagnosis, prognosis, monitoring and
CC treatment of breast cancer, particularly where metastatic. Diagnosis is
CC by standard immunoassays or hybridisation/amplification reactions.
CC Compounds that modulate expression of the transcripts are potentially
CC useful for treatment of (metastatic) breast cancer, while promoters from
CC the transcripts are used to direct expression, in selected cell types, of
CC e.g. therapeutic genes (also ribozymes or antisense sequences),
CC particularly an antigen-encoding sequence for use in gene or cell-based
CC vaccines. Polypeptides encoded by the transcripts are also useful in

CC vaccines; for diagnosing breast cancer and for raising specific
CC antibodies (Ab). Ab are used to detect the polypeptides or as therapeutic
CC agents. Host cells that produce the polypeptides can be used to expand
CC and isolate populations of educated, antigen-specific immune effecter
CC cells, e.g. cytotoxic T lymphocytes, and these used for adoptive
CC immunotherapy
XX
SQ Sequence 10 BP; 5 A; 4 C; 1 G; 0 T; 0 U; 0 Other;

Query Match 50.0%; Score 9; DB 3; Length 10;
Score over Length 90.0%;
Best Local Similarity 100.0%; Pred. No. 9.5e+05;
Matches 9; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          7 AAACCCAAG 15
              |||||||||
Db          1 AAACCCAAG 9
```

Sequence search alignment #2

```
RESULT 3
ABI57709
ID   ABI57709 standard; DNA; 12 BP.
XX
AC   ABI57709;
XX
DT   22-FEB-2002  (first entry)
XX
DE   Oligonucleotide primer SEQ ID NO 357682 for detecting SNP TSC0050733.
XX
KW   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
KW   peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss;
KW   central nervous system; gastrointestinal; respiratory; immune; metabolic.
XX
OS   Homo sapiens.
XX
PN   WO200177384-A2.
XX
PD   18-OCT-2001.
XX
PF   06-APR-2001; 2001WO-IB000713.
XX
PR   07-APR-2000; 2000DE-01019173.
XX
PA   (EPIG-) EPIGENOMICS AG.
XX
PI   Olek A, Piepenbrock C, Berlin K;
XX
DR   WPI; 2001-657177/75.
XX
PT   Set of oligonucleotides, useful for diagnosis and cell typing, is
PT   designed to detect single-nucleotide polymorphisms and cytosine
PT   methylation status.
XX
PS   Claim 1; SEQ ID NO 357682; 29pp + Sequence Listing; German.
XX
CC   This invention describes novel oligonucleotide primers or peptide nucleic
CC   acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP)
CC   and cytosine methylation status in chemically pretreated genomic DNA. The
CC   oligonucleotides are used for diagnosis and/or prognosis of cancer and a
CC   range of diseases including immune system, gastrointestinal, respiratory,
CC   central nervous system, cardiovascular and metabolic disorders. The
CC   oligomers are also used for detecting cell type differentiation. ABC00010
CC   -ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073
CC   represent the oligomers described in the invention. NOTE: The sequence
CC   data for this patent did not form part of the printed specification, but
CC   was obtained in electronic format from WIPO at
CC   ftp.wipo.int/pub/published_pct_sequences
XX
SQ   Sequence 12 BP; 7 A; 4 C; 0 G; 1 T; 0 U; 0 Other;

  Query Match             61.1%;  Score 11;  DB 5;  Length 12;
  Score over Length       91.7%;
  Best Local Similarity   100.0%;  Pred. No. 8.4e+04;
  Matches   11;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;
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```
Qy          4 CATAAACCCAA 14
              ||||||||||
Db          1 CATAAACCCAA 11
```